

Notice of Allowability

Application No.

10/755,146

Applicant(s)

DALAL ET AL.

Examiner

Nima Khomassi

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Response to CFR 1.105.
2. ☒ The allowed claim(s) is/are 1-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 5/31/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

The application having Application No. 10,755,146 has a total of 28 claims pending in the application; there are 9 independent claims and 19 dependent claims. Application filed by applicant on 1/9/2004, CFR 1.105 action by the examiner on 2/27/2006, response to CFR 1.105 by the applicant on 5/1/2006.

The examiner acknowledges the response to the Requirement for Information under CFR 1.105.

Allowable Subject Matter

Claims 1-28 are allowed.

The following is an examiner's statement of reasons for allowance: The present invention is directed to a method, apparatus and computer readable medium for preventing a TCP RST network attack. More specifically, independent claims 1, 4, 16, 20-25 recite similar claim language identifying uniquely distinct features: receiving a packet in which a RST bit of a TCP header is set, then determining whether a sequence value in the packet is within a range of allowed sequence values; then if the sequence value is within the range of sequence values, sending an ACK without closing a TCP connection associated with the flow. The closest prior art, as found in AAPA in OpenBSD implementation of TCP under UNIX, discloses a guard against a Reset attack by requiring that the Reset packet carry a sequence number that is exactly the next expected sequence number, and not just within the expected window. If a Reset packet carries a sequence number that is not an exact match, the TCP process ignores the Reset packet and does nothing. However, the OpenBSD implementation does not teach that when the

sequence value in the packet containing the Reset bit is within the range of allowed sequence values, sending an acknowledgement message without closing the TCP connection. Further, when the next packet of a flow in which the Reset bit is set comprising a second sequence value in which the aforementioned value is equal to an expected sequence value, then the TCP connection is closed.

The prior art, taken singly or in combination, fails to anticipate or fairly suggest the limitation of applicant's independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The claimed invention is therefore considered to be in condition for allowance as being novel and nonobvious over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications should be directed to Nima Khomassi whose telephone number is (571) 272-3775. The examiner can normally be reached Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron Jr., can be reached at (571) 272-3799.

The fax number for Formal or Official faxes to Technology Center 2100 is 571-273-8300. On July 15, 2005, the Central Facsimile (FAX) Number changed from 703-872-9306 to

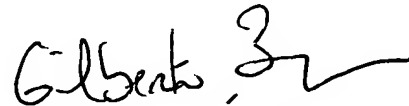
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571-273-8300. As of September 15, 2005, the former is no longer in service; the latter is the only facsimile number recognized for centralized delivery.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nima Khomassi
June 1, 2006
Art Unit #2132



GILBERTO BARRON JR
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100